

Y6 - Living Things and their Habitats

Lesson 4

Lesson	4 of 6	Key Unit Question:	What is classification?	Key Lesson Question:	Is yeast a living microorganism?
Learning Objective		NC Links		Resources	
I understand that microorganisms are also living things.		<ul style="list-style-type: none"> describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals <p>Working scientifically:</p> <ul style="list-style-type: none"> recording data and results of increasing complexity using scientific diagrams and labels classification keys, tables, scatter graphs, bar and line graphs reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentation identifying scientific evidence that has been used to support or refute ideas or arguments 		<ul style="list-style-type: none"> Presentation Investigation activity Challenge activity sheet Next step Yeast investigation instructions A packet of yeast, some sugar, a small plastic bottle and a balloon. 	

Teaching Input

- Introduce the learning objective on PPT slide 1/PDF title page
- Recap on previous learning – how can we classify plants? What criteria could we use (vascular/non-vascular, flowering/non-flowering, methods of seed dispersal). How can we sort animals into groups?
- Thinking time – explain to the children that today they will be looking at another type of living thing that isn't a plant or an animal; can they guess what it is using the clues on PPT slide 3 /PDF p2? Ask the children to work in pairs and discuss what the living thing might be.
- Take feedback from the class and reveal the answers on PPT slide 4/PDF p3.
- Read the information on PPT slide 5/PDF p4 and explain what a microorganism is. Make links to the adjective micro meaning very small.
- Ask the children to work in pairs to discuss whether microorganisms are good or bad. Can they give reasons for their opinions? Take feedback and review using PPT slide 7/PDF p6
- Ask the children if they have ever had mouldy sandwiches or seen mould grow on food at home. Explain that mould is a type of microorganism, it is a living thing. Read the information about mould, dust mites and yeast on PPT slide 8 and 9 /PDF p7 and 8
- Class investigation – how do we know that yeast is a living thing? What are the seven life processes that all living things do? Hint – remember MRS GREN! Go through the seven life processes on PPT slide 11/PDF p10.
- Which of the seven life processes could we use to test if yeast is a living thing? Remind the children that yeast consumes sugar and gives off carbon dioxide (a gas) and that this is respiration. How could we investigate if yeast respire?
- Ask the children to read the yeast investigation instructions in pairs. How will they know that a gas is being released? How will that prove that yeast does respire and is a living thing?
- As a class or in small groups, set up the investigation.
- Plenary – ask the children – What happened to the balloon? Why did it happen? How could we improve the investigation? Ask the key lesson question – Is yeast a living microorganism and how do we know?

BACKGROUND INFORMATION FOR TEACHERS

There are seven characteristics of living things. Mrs Nerg is a well-known acronym used to remember the seven life processes Movement, Respiration, Sensitivity, Nutrition, Excretion, Reproduction and Growth. A microorganism, or microbe, is an organism of microscopic size which may exist in it single-celled form or as a colony of cells.

Differentiated Activities

★ (working below)

Children work in small groups to conduct an experiment to see if yeast respire. They need to predict what will happen during the investigation and record their results by observing and drawing the balloon after 5, 10, 15 and 20-minute intervals with adult support.

★★ (working at)

Children work in small groups to conduct an experiment to see if yeast respire. They need to predict what will happen during the investigation and record their results by observing and drawing the balloon after 5, 10, 15 and 20-minute intervals.

Challenge activity

Explain how the yeast causes the balloon to inflate and how this proves that microorganisms are living things.

Next Step activity

How could you adapt the yeast investigation to answer this question: which water temperature causes yeast to make the most gas? Encourage the children to think about the variables they would control to keep the experiment fair. What is the variable that they will change?

Assessment questions

What is a microorganism?
Can you name the seven life processes?
Can you explain how yeast causes the balloon to inflate?

Self assessment

I know what a microorganism is.
I can explain how I know that microorganisms are living things.

Key vocabulary

microorganism
microbe
microscope
yeast
mould
inflate
respiration